

Reply to Office Action dated October 25, 2005

REMARKS

Claims 1, 5-7, 21-22, 24-26 and 28-33 are pending in this application. By this Amendment, the specification, claims 1, 21, 22, 24, 32 and 33 are amended. The specification is amended to correct a typographical error. FIG. 6 clearly shows that the widths are "Tb" and "Ta" rather than "Td."

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments: a) place the application in condition for allowance for the reasons set forth below; b) do not raise any new issues that require further search and/or consideration; and/or c) place the application in better form for an appeal should an appeal be necessary. More specifically, the above amendments merely clarify the subject matter as well as incorporate features of dependent claims 21 and 32 into the independent claims. Thus, no new issues are raised. Entry is proper under 37 C.F.R. §1.116.

The Office Action objects to the drawings under 37 C.F.R. §1.83(c). In particular, the Office Action asserts that the features "widths of the plurality of data pulses varying based on logic values of input data signals" must be shown in the drawings. Applicant respectfully submits that independent claim 1 now recites a width of each of the plurality of data pulses being based on a logic value of at least one of the input data signals. Applicant respectfully submits that at least FIG. 6 shows these features. More specifically, FIG. 6 shows data pulse widths Ta, Tb, Tc and Td where each of the widths Ta, Tb, Tc and Td is based on a logic value of at least one of the input data signals. See paragraphs [0038]-[0040]. Accordingly, the drawings adequately show all the claimed features. Withdrawal of the objection to the drawings is respectfully requested.

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The Office Action objects to claims 21, 22, 32 and 33 under 37 C.F.R. §1.75(a). It is respectfully submitted the above amendments to claims 21-22 and 32-33 obviate the grounds for objection. Withdrawal of the objection is respectfully requested.

The Office Action further rejects claims 1, 5-7, 21, 22, 24-26 and 28-33 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description. In particular, the Office Action asserts that the previously claimed features are not described in the specification. These features include "widths of the plurality of data pulses varying based on logic values of input data signals," "the first pulse width is greater than the second pulse width" and "scanning pulses having a pulse width identical to the first data pulse width." Applicant respectfully submits that the currently pending claims are adequately described in the specification to enable one skilled in the art to make and/or use the claimed features.

More specifically, paragraph [0039] clearly describes that different pulse widths may be provided, such as pulse widths of Ta, Tb, Tc and Td. As one non-limiting example, the first data pulse width may correspond to Ta, the second data pulse width may correspond to Tb and the third data pulse width may correspond to Tc (or Td). As shown in FIG. 6, Ta is greater than Tb. Further, paragraph [0038] describes one example of Ta as 1.4 μ s whereas paragraph [0039] describes one example of Tb as 0.8 μ s. Additionally, a width Ta of the data pulse is identical to a width of the scanning pulse. See paragraph [0038]. As specifically described in paragraph [0039], if a data signal of a logic value '1' is supplied to an address electrode line continuously, (i.e., more than one data signal), then a data pulse of width Tc is applied. See also paragraph [0040]. Thus, the specification does provide an adequate written description of the currently claimed features.

The Office Action references page 9, line 9-page 10, line 19 of the present specification. See the bottom of page 4 of the Office Action. Applicant respectfully points out that those page and line numbers appear to be inaccurate (based on applicant's filed copy of the application). Thus, applicant has addressed the paragraph numbers of the specification in order to avoid any ambiguity.

The Office Action also rejects claims 1, 5, 6, 21, 22, 24-26, 28, 29 and 31-33 under 35 U.S.C. §102(e) over U.S. Patent 6,407,510 to Yoo et al. (hereafter Yoo). The rejection is respectfully traversed with respect to the pending claims.

Yoo specifically discloses that an address electrode may receive a main data pulse MDP as well as possibly receive an auxiliary data pulse ADP in addition to the main data pulse MDP. See Yoo's col. 3, lines 48-56. Thus, the main data pulse MDP and the auxiliary data pulse ADP are separate pulses. Yoo also specifically discloses that a data pulse applied to the address electrode has a different pulse width in accordance with a logical value of data. For example, if a logic value of data is 1, then a main data pulse MDP is applied. On the other hand, if the logic value of a data supplied to an address electrode line is 0, then an auxiliary data pulse ADP is applied. Again, these are separate pulses. Yoo also specifically discloses that a multiplexer 54 outputs auxiliary data pulse ADP when a 1 is applied as a fourth clock and outputs a main data pulse MDP when a clock of 0 is applied as the fourth clock. See col. 6, lines 33-36. Accordingly, Yoo specifically describes only two data pulse widths, one width for a main data pulse MDP and a second width for an auxiliary data pulse ADP. In Yoo, the main data pulse and the auxiliary data pulse are separately and independently generated.

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Yoo does not teach or suggest if a first one of the input data signals has a first logic value then the width of a corresponding one of the data pulses is a first data pulse width and if a second one of the input data signals has a second logic value then the width of a corresponding one of the data pulses is a second data pulse width, and if two consecutive input data signals have the first logic value then the width of a corresponding one of the data pulses is a third data pulse width, wherein the first data pulse width is greater than the second data pulse width, and the third data pulse width is different than the first data pulse width and the second data pulse width. Yoo does not suggest the claimed three data pulse widths. Rather, Yoo only describes a pulse width for a main data pulse MDP and another pulse width for an auxiliary data pulse ADP.

Applicant respectfully submits that the claim language discussed on pages 5-6 of the Office Action does not correspond to the exact claim language (as previously presented). However, the Office Action appears to assert that the first data pulse corresponds to a width of $(T_d + 2T_{ad})$ and the second data pulse corresponds to a width of (T_d) . However, applicant respectfully disagrees as the alleged width of $(T_d + 2T_{ad})$ corresponds to three data pulses, namely the three pulses ADP, MDP and ADP. Thus, this does not suggest that a width of a corresponding one of the data pulses is a first data pulse width. Yoo does not teach or suggest the claimed first, second and third data pulse widths. For at least the reasons set forth above, Yoo does not teach or suggest all the features of independent claim 1, Thus, independent claim 1 defines patentable subject matter.

Independent claim 24 defines patentable subject matter for at least similar reasons. That is, independent claim 24 recites if a first one of the input data signals has a first logic value then

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the width of a corresponding one of the data pulses is a first data pulse width and if a second one of the input data signals has a second logic value then the width of a corresponding one of the data pulses is a second data pulse width, and if two consecutive input data signals have the first logic value then the width of a corresponding one of the data pulses is a third data pulse width, wherein the first data pulse width is greater than the second data pulse width, and the third data pulse width is different than the first data pulse width and the second data pulse width. For at least similar reasons as set forth above, Yoo does not teach or suggest these features. Accordingly, independent claim 24 defines patentable subject matter.

Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references. For example, Yoo does not teach or suggest the specific features recited in each of dependent claims 21, 22, 32 and 33.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 5-7, 21-22, 24-26 and 28-33 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

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concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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